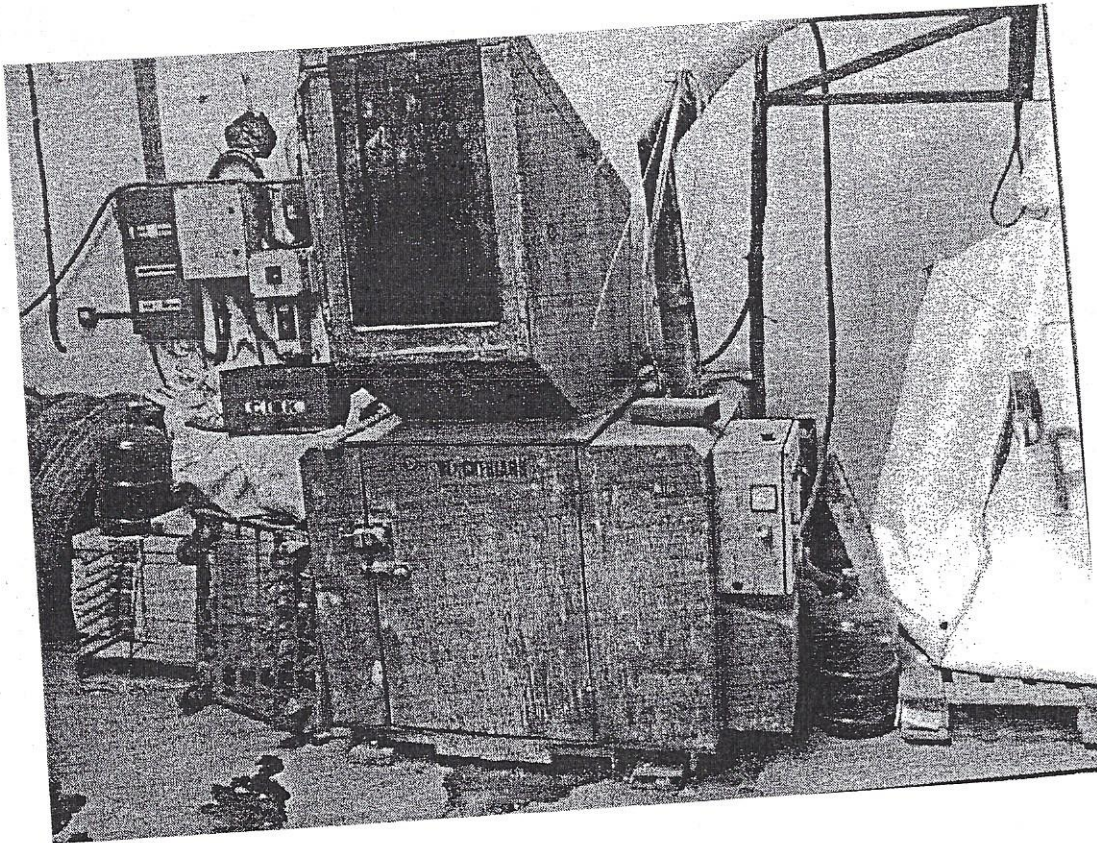


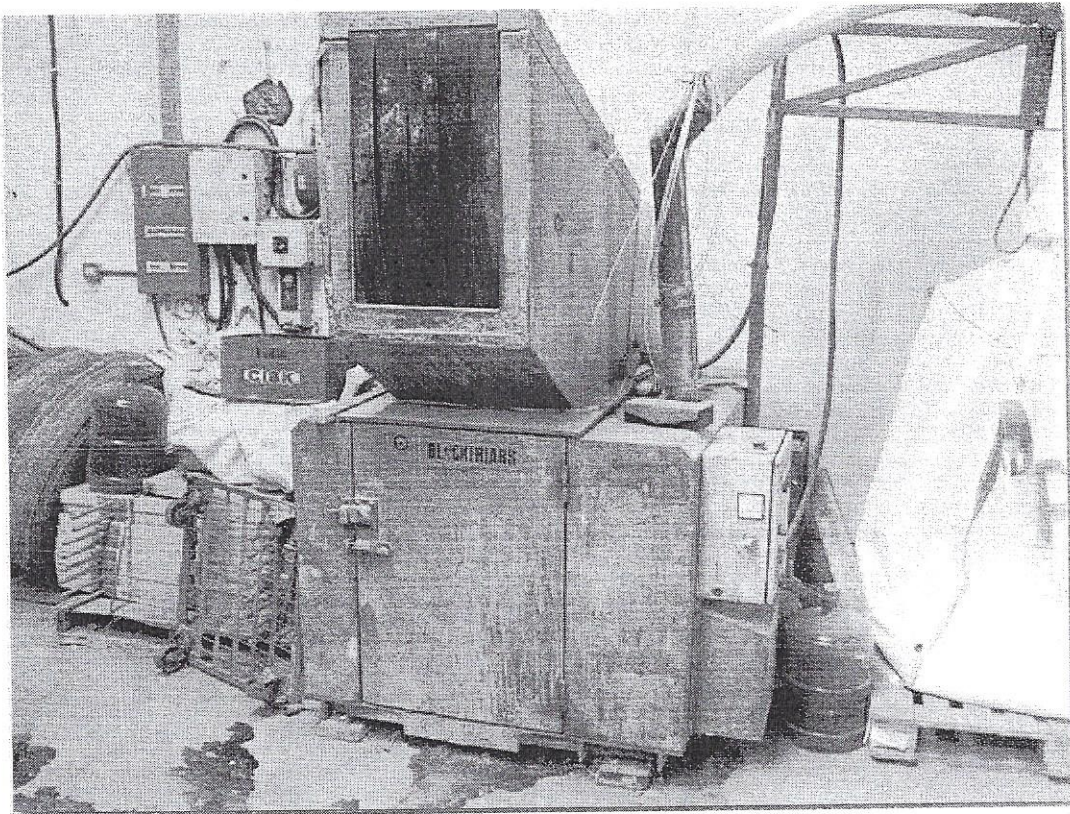
# Granulator





№ 3 M 1104 07 ① Power K 4040/60  
№ 3 M 11252 ② Power K 4040/29

## Granulator

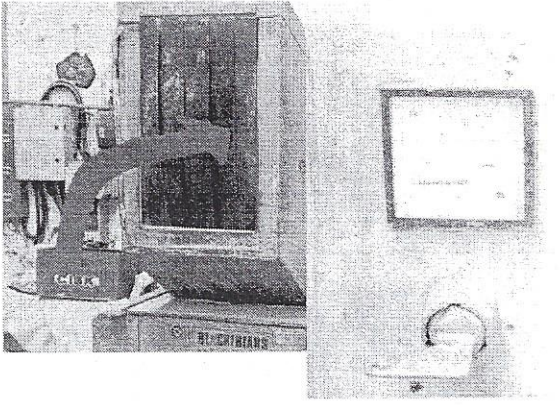
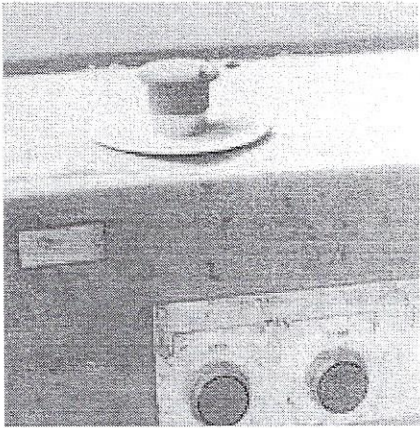
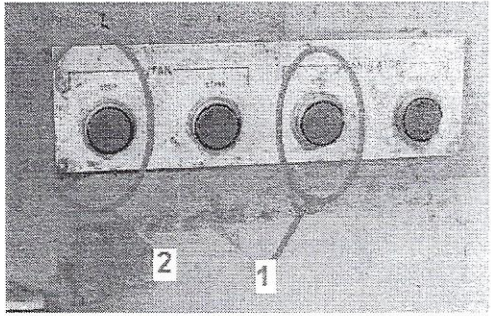


→ To be checked.

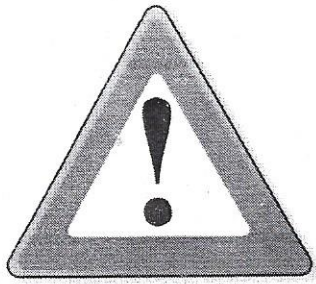


## Operating instruction

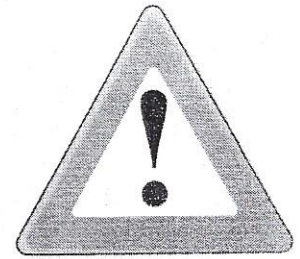
Tasks	Description	Picture
Checking before running	<ul style="list-style-type: none"> <li>- Ensure sharp, correctly set knives are fitted (see right knife on the draw beside).</li> <li>- Check the V-Belt tension (see (n) in maintenance)</li> <li>- Check tightness of all knife fixing screws</li> <li>- Rotate rotor by-hand to ensure that cutting knives do not clash</li> <li>- Check size of screen plate perforations and ensure that screen cradle screws are tight.</li> <li>- Engage the key exchange interlock (15)</li> <li>- Run machine and check direction of rotation of rotor</li> <li>- Run machine and disengage key switch on control panel to ensure that main drive is cut out and safety circuit is operative.</li> </ul>	<p>30 degree</p> <p>FLY KNIFE</p> <p>9 degree</p> <p>DEAD KNIFE</p> <p>85 New Width 70 Min Width</p>
Place the collecting vessel	Ensure a collecting vessel is beneath the cyclone outlet and <b>well attached, put it on a pallet.</b>	<p>COLLECTING VESSEL</p>
Start the Machine	<p>Press "FAN" start button (the electrical control system will not allow the granulator to start unless the Fan is running).</p> <p>Press "GRANULATOR" start button.</p>	<p>1 2</p>

<p><b>Feed the Granulator</b></p>	<p>Feed Granulator systematically and steadily. An ammeter is fitted to the side of the control panel; this should be viewed as material is fed to the machine. If the arrow is up to 40 wait before putting new wastes. <b>DON'T PUT YOUR HANDS INSIDE OF THE FEEDER.</b></p>	
<p><b>Stop in an emergency</b></p>	<p>To stop the granulator in an emergency the "E" stop button is mounted to the top of the main control panel. If the "E" stop button is pressed the granulator will stop immediately. If material is present in the granulator this <b>must be cleaned out before</b> the granulator is restarted.</p>	
	<p>To stop the granulator at the end of a shift, to change product or for maintenance the granulator should be allowed to "clear"</p>	
<p><b>Stop the Machine</b></p>	<p>Before stopping the machine, it should be run until all granulating has ceased, and the cutting chamber is clear of materials. Press "GRANULATOR" stop button (electrical control system will not allow the fan to stop before the granulator). Allow granulated material time to pass through the fan system. Press "FAN" stop button.</p>	
	<p>Access to the granulator is now available. Cleaning, maintenance and checking can now be carried out.</p>	

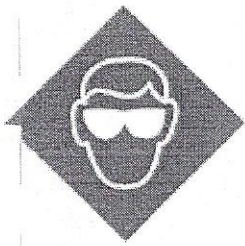




## HEALTH & SAFETY



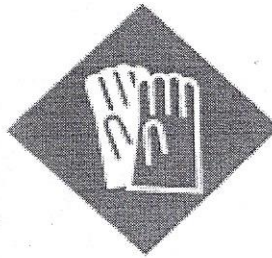
### HAVE TO BE WORN TO USE THIS MACHINE :



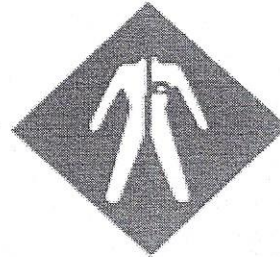
Eye protection



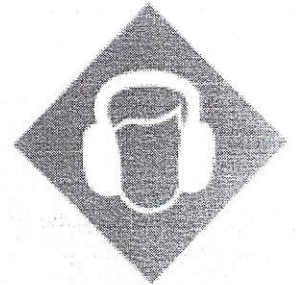
Safety footwear



Gloves



Protective  
clothing



Ear protection

Carry out the maintenance as mentioned in the manual's instructions.

### In case of accident or of a discovery of someone in difficulty:

- Contact Green Skip : **21422009** (from inside of the company : 111)
- In case of absence: 21422010/21422017

- 1) Call the emergency general number typing the number



**112**

or for the ambulance 196.

- 2) Give the address of the place: **GREEN SKIP GROUP SERVICES LTD, Ta' I imriekeb, Ramla road, Maghtab-Naxxar, NXR 6540, MALTA**, explaining the entrance and the floor of the building where the people to save are.
- 3) Go to welcome the emergency services at the address you told them.

## **SAFETY INSTRUCTIONS :**

Before working on the starters with the supply connected:

- Ensure that it is absolutely necessary to work on the equipment whilst in a live condition.
- Ensure that you are fully aware of the layout of the starter and where to expect live conditions.
- Ensure that you are within sight of other people who could come to your aid if necessary.
- Ensure that any tools or equipment used are suitable for working on live equipment.
- All control panels/starters for operating on low voltage contain devices which are dangerous and can cause serious or fatal injury.
- It is essential that all supplies are isolated before working on the control panel/starter.
- Because of this danger, it is recommended that any personnel working on the equipment are within sight of other personnel at all times
- Persons responsible for installation should have a working knowledge of the IEE Wiring Regulations, Health and Safety At Work Act 1974 and the Electricity At Work Regulations 1989.
- No special tools are required to service the control panel/starter.
- Operators must be made aware of the possible hazards of feeding long lengths of film, sheet or fibrous material which can be violently pulled into the granulator.
- Extreme care must be exercised when unpacking and handling spare knives. The cutting edges are sharp and can cause serious injury if the blades are dropped or mishandled.

## **SAFETY FEATURES :**

**1) The granulator is fitted with a key exchange safety interlock system.**

### **Opening sequence:**

- 1 Stop granulator
- 2 Turn switch key and remove key "A" (from control panel)
- 3 Place key "A" into free switch at rear of the feed hopper – turn key.
- 4 Unscrew time delay bolt key "B" can now be turned and released
- 5 Place key "B" in front door lock and turn key
- 6 Remove spring bolt from lock and open doors.

### **Closing sequence :**

Reverse above sequence

**2) The rotor lock:**

Is designed to assist with the safe fitting and removing of rotor knives.

The rotor lock is wired through the safety circuit and includes a disc pad.



## **MAINTENANCE :**

When the granulator is opened up for work on or around the cutting chamber, the rotor can be turned by hand. Operators must use the rotor lock whilst changing or adjusting the knives. When the granulator is open for any work on its interior, the isolator must be in the "OFF" position.

### **1) Regular intervals :**

- At every knife change the screws should be carefully examined to ensure that the threads are in good condition, and also that the heads are not worn. All knife screws should be replaced at regular intervals.
- The flaps at the entry to the feed hopper must be complete and properly maintained to guard against throw back.
- The guarding over the mechanical drive must be in proper order.

### **2) Routine inspection every 6 months:**

#### **Disconnect all external supplies**

Open panel/starter and make visual inspections for :

- (a) Overheating/arcing
- (b) Ingress of dirt/moisture
- (c) Check all screws and fixings to ensure that they are tight
- (d) Check all wiring connections to ensure that they are tight
- (e) Check all moving parts for ease of operation
- (f) Examine all wiring, particularly in the vicinity of metal parts of the equipment, to ensure that none of the insulation is damaged
- (g) Check mechanical interlocks of contactors, isolators etc., to ensure that they are functioning correctly.
- (h) Check push buttons and switches for normal mechanical operation.
- (i) Check door seals are free from damage and ensure door hinges are also free from damage and do not restrict door opening.
- (j) Check cable entry plates and glands to ensure that incoming and outgoing cables are securely fastened to the enclosure.
- (k) Check all earth connections are tight and free from corrosion. Particular attention should be paid to the earthy links between the enclosure and the doors, where they are fitted.
- (l) Electrical checking of the wiring should be carried out by means of high voltage test equipment to check the insulation resistance to earth and between phases. It should be noted that electronic equipment may require disconnecting in order to carry out this test.

(m) Check all earth connections for continuity, particularly on enclosure doors which are fitted with electrical equipment.

(n) Check the V-Belt tension :

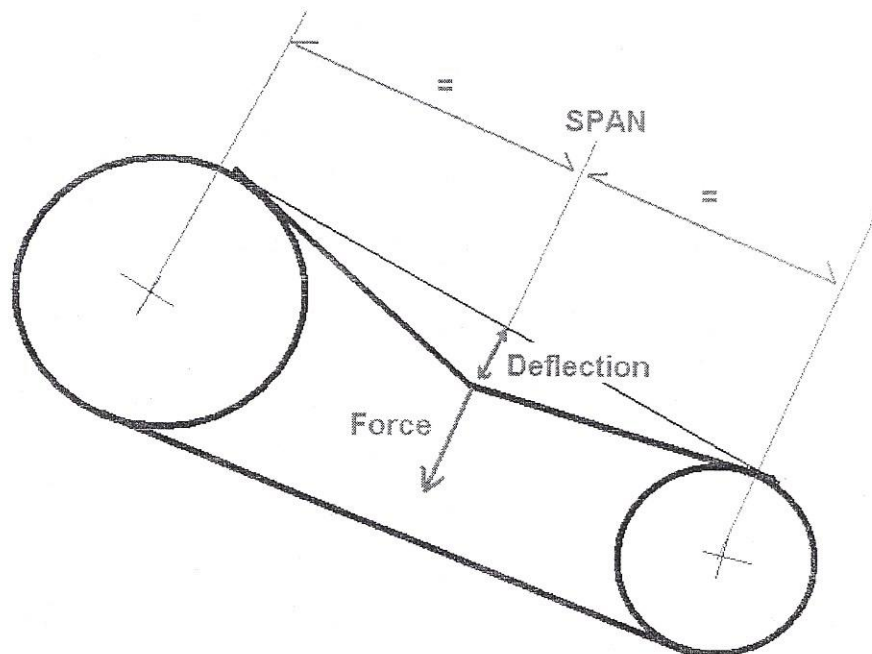
- 1) Measure the span length of the drive
- 2) At the centre of the span apply a force at right angles to the span, to deflect one belt 16mm per meter of span (5/8" per 40")
- 3) Compare the force required with the values given in the diagram below.
- 4) Re-adjust if necessary.

**ALWAYS** Tension a new drive to the higher value to allow for the normal drop in tension during the running-in period. Check and re-adjust to the higher value after a few hours running.

The drive should be subsequently checked and re-tensioned to the higher value at regular maintenance intervals.

**IMPORTANT:** Always use a matched set of belts.

Belt section	Kg ----- Force	Lbs ----- FORCE
SPB	5.1 -----6.6	12 - -----15



- (o) For the detailed check of components and action required, look at the maintenance and instruction manual p4 number 1 to 12. (Bus bars, fuses,



isolators, contactors, overload units, relays, push buttons/switches, timers, thermistor protection units, indicator lamps, wiring, and instruments).

- (p) Bearing maintenance for the fan : the bearings need only to be dismantled, cleaned and replenished with new lubricant

**3) Every 1000 working hours:** the rotor bearing housings are packed with grease and subsequent greasing should be carried out. Over greasing will result in overheating the bearings. Normally grease should occupy approximately 50% of the housing space. The recommended greases are in the manual book number 11.

**Schedule of Maintenance:**

Note down every time you use the machine and what kind of maintenance was carried out as mentioned in the manual's instructions.

[illegible]